Name:_____

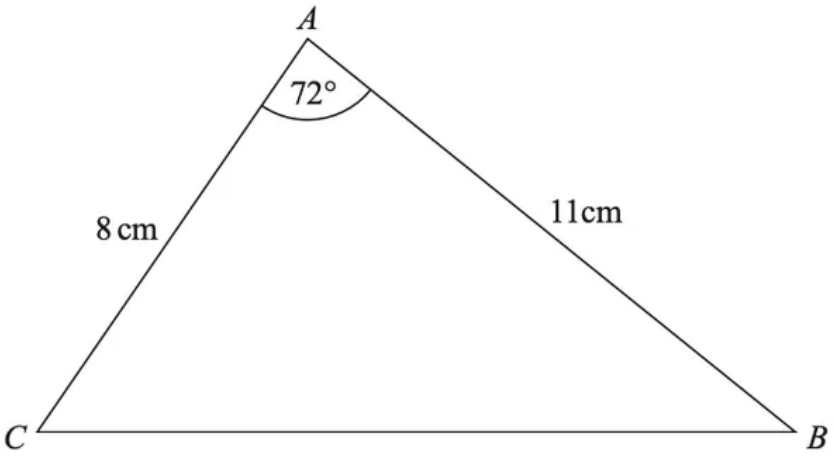
GCSE (1 - 9) The Cosine Rule	Solutions:

These questions are compiled from *released* Pearson Edexcel GCSE maths exam papers
They contain exam questions from up until the ***November 2021*** exam series
More recent exam papers do exist but are withheld for mock exams
As new exam papers are released these worksheets will gradually be updated
The ***most current*** version of these worksheets will always be available at: kennethstafford.co.uk
These worksheets were made using examq.co.uk

Question	Where the question appeared
1	Edexcel, GCSE, Autumn 2021, Paper 2H, Q15
2	Edexcel, GCSE, Autumn 2019, Paper 3H, Q18
3	Edexcel, GCSE, Summer 2019, Paper 3H, Q23
4	Edexcel, GCSE, Autumn 2018, Paper 3H, Q16
5	Edexcel, GCSE, Summer 2018, Paper 3H, Q17
6	Edexcel, GCSE, Autumn 2017, Paper 3H, Q17
7	Edexcel, GCSE, Summer 2017, Paper 1H, Q2

1

Here is triangle ABC.



(a) Find the length of BC.
Give your answer correct to 3 significant figures.

..... cm

(3)

(b) Find the area of triangle ABC.
Give your answer correct to 3 significant figures.

..... cm^2

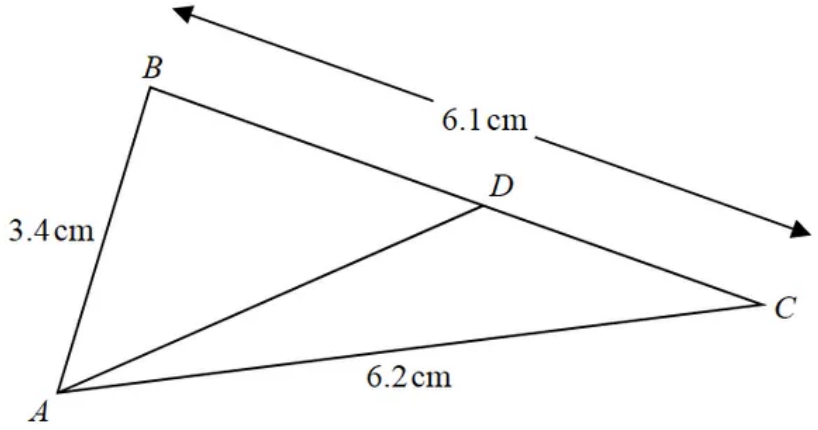
(2)

(Total for Question 15 is 5 marks)

[Edexcel, GCSE, Autumn 2021, Paper 2H, Q15]

2

The diagram shows triangle ABC.



$AB = 3.4\,\text{cm}$ $AC = 6.2\,\text{cm}$ $BC = 6.1\,\text{cm}$

D is the point on BC such that

$$\text{size of angle } DAC = \frac{2}{5} \times \text{ size of angle } BCA$$

Calculate the length DC.
Give your answer correct to 3 significant figures.
You must show all your working.

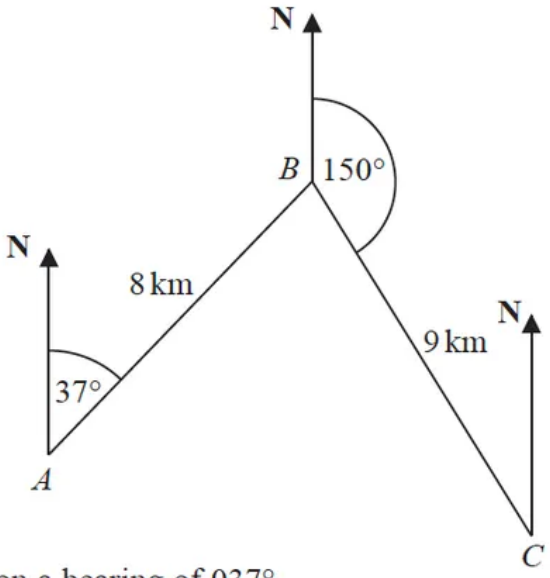
..... cm

(Total for Question 18 is 5 marks)

[Edexcel, GCSE, Autumn 2019, Paper 3H, Q18]

3

The diagram shows the positions of three towns, Acton (A), Barston (B) and Chorlton (C).



Barston is 8 km from Acton on a bearing of 037°
Chorlton is 9 km from Barston on a bearing of 150°

Find the bearing of Chorlton from Acton.
Give your answer correct to 1 decimal place.
You must show all your working.

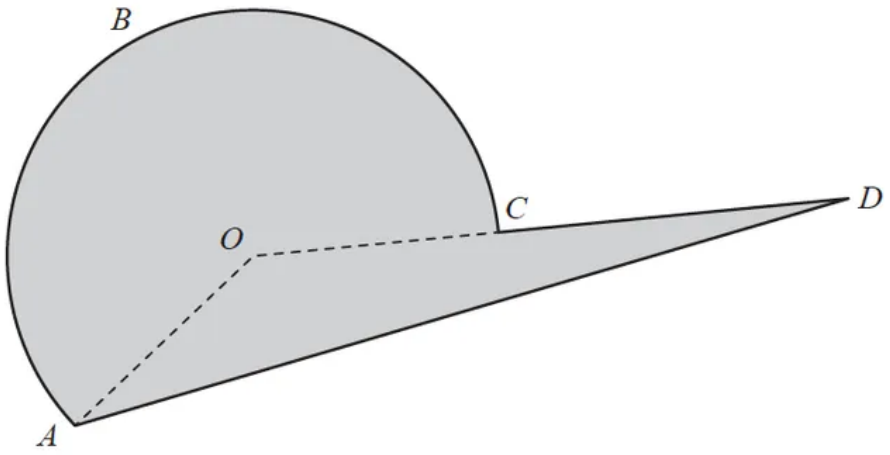
.....°

(Total for Question 23 is 5 marks)

[Edexcel, GCSE, Summer 2019, Paper 3H, Q23]

4

Here is a shaded shape $ABCD$.



The shape is made from a triangle and a sector of a circle, centre O and radius 6 cm.
OCD is a straight line.

$AD = 14$ cm
Angle $AOD = 140°$
Angle $OAD = 24°$

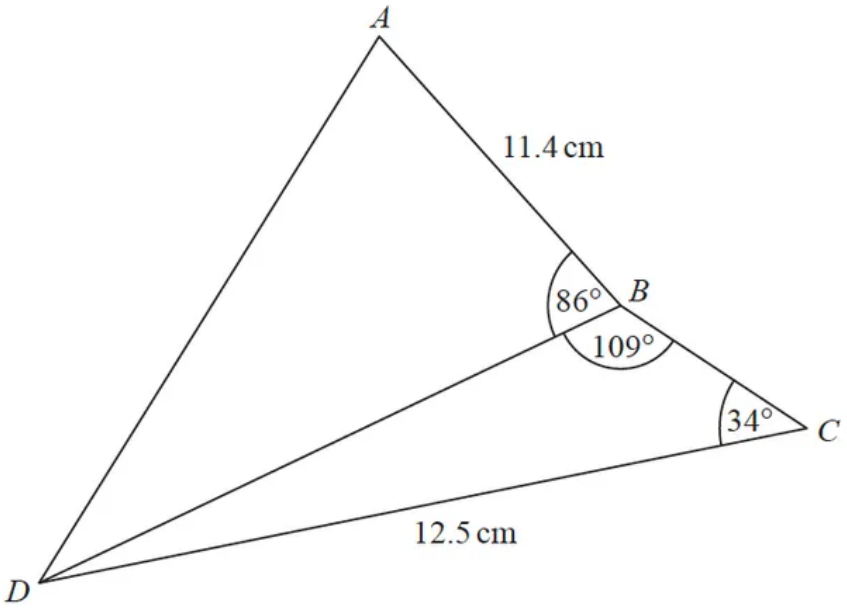
Calculate the perimeter of the shape.
Give your answer correct to 3 significant figures.

..... cm

(Total for Question 16 is 5 marks)

[Edexcel, GCSE, Autumn 2018, Paper 3H, Q16]

5



Work out the length of AD.
Give your answer correct to 3 significant figures.

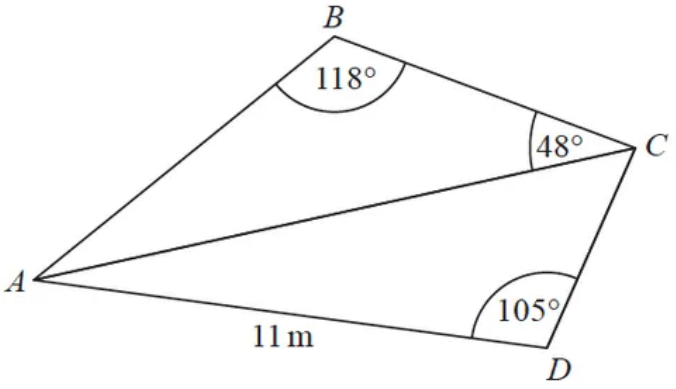
..... cm

(Total for Question 17 is 5 marks)

[Edexcel, GCSE, Summer 2018, Paper 3H, Q17]

6

ABC and *ADC* are triangles.



The area of triangle *ADC* is 56 m^2

Work out the length of *AB*.
Give your answer correct to 1 decimal place.

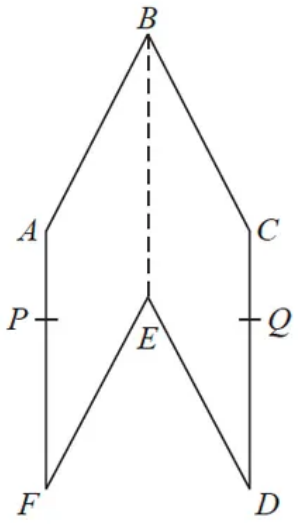
..... m

(Total for Question 17 is 5 marks)

[Edexcel, GCSE, Autumn 2017, Paper 3H, Q17]

7

The diagram shows a hexagon $ABCDEF$.



$ABEF$ and $CBED$ are congruent parallelograms where $AB = BC = x$ cm.
P is the point on AF and Q is the point on CD such that $BP = BQ = 10$ cm.

Given that angle $ABC = 30°$,

prove that $\cos PBQ = 1 - \dfrac{(2 - \sqrt{3})}{200}x^2$

(Total for Question 22 is 5 marks)

[Edexcel, GCSE, Summer 2017, Paper 1H, Q2]